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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/706,880
	Filing Date	November 12, 2003
	First Named Inventor	Shuibo Xie
	Art Unit	*
	Examiner Name	*
Total Number of Pages in This Submission	Attorney Docket Number	1856-40401(9948.0-02)

ENCLOSURES (check all that apply)		
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm Or Individual Name	Jeffrey L. Johnson 53,078
Signature	
Date	February 4, 2004

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Shuibo Xie et al.	§	GROUP ART UNIT:
		§	
SERIAL NO.:	10/706,880	§	
		§	EXAMINER:
FILED:	November 12, 2003	§	
		§	
FOR:	Improved Supports for High Surface	§	
	Area Catalysts	§	

INFORMATION DISCLOSURE STATEMENT

Atty. Dkt. No.: 1856-40401(9948.0-02)

Date: February 4, 2004

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

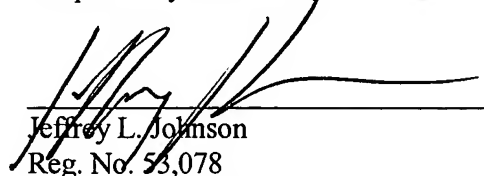
Sir:

This Information Disclosure Statement, including completed Form PTO-1449, comprises a list of pertinent art of which Applicants are aware. If this application was filed prior to June 30, 2003, a copy of each publication listed on Form PTO-1449 is enclosed herewith.

The submission of this Information Disclosure Statement and the references submitted therewith is not an admission that the art cited is "prior" with respect to the present invention, nor is it a representation, that no better art exists. Applicants hereby reserve the right to swear behind or otherwise disprove any alleged "prior" nature of any art cited should the facts support and the situation warrant such an action. It is submitted that the art cited does not constitute a bar to the patentability of Applicants' invention under 35 U.S.C. § 102 or § 103.

As this Information Disclosure Statement is being filed pursuant to 37 C.F.R. § 1.97(b), no certification or fee is required.

Respectfully submitted,



Jeffrey L. Johnson

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ATTORNEY/AGENT FOR APPLICANT

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
 (Use several sheets if necessary)

 Atty. Docket No.
 1856-40401 (9948.0-02)

 Serial No.
 10/706,880

 Applicant
 Shuibo Xie et al.

 Filing Date
 November 11, 2003

Group


REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
	AA	3752775	08/14/1973	Yamaguchi et al.	252	464	
	AB	4537873	08/27/1985	Kato et al.	502	242	
	AC	4585752	04/29/1986	Ernest	502	314	
	AD	4738946	04/19/1988	Yamashita et al.	502	303	
	AE	4793797	12/27/1988	Kato et al.	143	7	
	AF	4961786	10/09/1990	Novinson	106	692	
	AG	5837634	11/17/1998	McLaughlin et al.	501	127	
	AH	6399528	06/04/2002	Krell et al.	501	80	03/05/2001
	AI	2003/0032554	02/13/2003	Park et al.	502	302	05/13/2002

FOREIGN PATENT DOCUMENTS

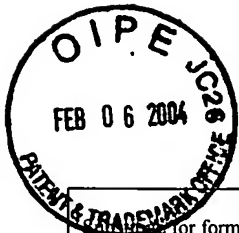
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EXAMINER

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP '609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.



INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known		
			Application Number	10/706,880	
			Filing Date	November 12, 2003	
			First Named Inventor	Shuibo Xie	
			Group Art Unit		
			Examiner Name		
Sheet	2	of	4	Attorney Docket Number	1856-40401(9948.0-02)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T ²	
	AJ	Amato et al., <i>Sintering of Pelleted Catalysts for Automotive Emission Control</i> , pp. 187-197		
	AK	Arai et al., <i>Recent Progress in High-Temperature Catalytic Combustion</i> , Catalysis Today, 10 (1991) pp. 81-94		
	AL	Arai et al., <i>Thermal Stabilization of Catalyst Supports and their Application to High-Temperature Catalytic Combustion</i> , Applied Catalysis A: General 138 (1996) pp. 161-176		
	AM	Artizzu-Duart et al, <i>Catalytic Combustion of Methane on Substituted Barium Hexaaluminates</i> , Catalysis Today 59 (2000) pp. 163-177		
	AN	Beguin et al., <i>Stabilization of Alumina by Addition of Lanthanum</i> , Applied Catalysis 75 (1991) pp. 119-132		
	AO	Bish et al., <i>Quantitative Phase Analysis Using the Rietveld Method</i> , J. Appl. Cryst. (1998) 21, pp. 86-91		
	AP	Cai et al., <i>Atomic Scale Mechanism of the Transformation of γ-Alumina to O-Alumina</i> , Physical Review Letters, Vol. 89, No. 23, (12/02/2002) pp. 235501-1 – 235501-4		
	AQ	Chen et al., <i>High Temperature Thermal Stabilization of Alumina Modified by Lanthanum Species</i> , Applied Catalysis A: General 205 (2001) pp. 159-172		
	AR	Dexpert-Ghys, <i>Optical and Structural Investigation of the Lanthanum β-Alumina Phase Doped with Europium</i> , Journal of Solid State Chemistry 19, (1976) pp. 193-204		
	AS	Farrington et al., <i>The Lanthanide β'' Alumina</i> , Applied Physics A 32 (1983) pp. 159-161		
	AT	Groppi et al., <i>Preparation and Characterization of Hexaaluminate-Based Materials for Catalytic Combustion</i> , Applied Catalysis A: General, 104 (1993) pp. 101-108		
	AU	Jang et al., <i>Catalytic Oxidation of Methane Over Hexaaluminates and Hexaaluminate-Supported Pd Catalysts</i> , Catalysis Today 47 (1999) pp. 103-113		
	AV	Johansson et al., <i>Development of Hexaaluminate Catalysts for Combustion of Gasified Biomass in Gas Turbines</i> , Journal of Engineering for Gas Turbines and Power, Vol. 124 (04/2002) pp. 235-238		
	AW	Kato et al., <i>Preparation of Lanthanum β-Alumina with High Surface Area by Coprecipitation</i> , Journal of the American Ceramic Society, 70 [7] (07/1987) pp. C-157-159		
	AX	Levy et al., <i>The Effect of Foreign Ions on the Stability of Activated Alumina</i> , Journal of Catalysis 9 (1967) pp. 76-86		
Examiner Signature			Dated Considered	



Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known	
		Application Number	10/706,880
		Filing Date	November 12, 2003
		First Named Inventor	Shuibo Xie
		Group Art Unit	
Examiner Name			
Attorney Docket Number	1856-40401(9948.0-02)		
Sheet	3	of	4

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T ²
	AY	Liu et al., <i>Partial Oxidation of Methane over Nickel Catalysts Supported on Various Aluminas</i> , Korean Journal of Chemical Engineering 19 (5) pp. 735-741 (2002)	
	AZ	Liu et al., <i>Partial Oxidation of Methane over Ni/Ce-ZrO₂/0-Al₂O₃</i> , Korean Journal of Chemical Engineering 19(5) pp. 742-748 (2002)	
	BA	Machida et al., <i>Effect of Additives on the Surface Area of Oxide Supports for Catalytic Combustion</i> , Journal of Catalysts 103 (1987) pp. 385-393	
	BB	Machida et al., <i>Analytical Electron Microscope Analysis of the Formation of BaO – 6Al₂O₃</i> , Journal of American Ceramic Society 71[12] pp. 1142-47 (1988)	
	BC	Machida et al., <i>Effect of Structural Modification on the Catalytic Property of Mn-Substituted Hexaaluminates</i> , Journal of Catalysis 123 (1990) pp. 477-785	
	BD	Matsuda et al., <i>8th International Congress on Catalysis Volume IV: Impact of Surface Science on Catalysis Structure-Selectivity/Activity Correlations New Routes for Catalyst Synthesis (pp. IV-879-889)</i>	
	BE	Miao et al., <i>Partial Oxidation of Methane to Syngas over Nickel-Based Catalysts Modified by Alkali Metal Oxide and Rare Earth Metal Oxide</i> , Applied Catalysts A: General 154 (1997) pp. 17-27	
	BF	Nair et al., <i>Pore Structure Evolution of Lanthana-Alumina Systems Prepared through Coprecipitation</i> , Journal of American Ceramic Society 83[8] (2000) pp. 1942-1946	
	BG	Oudet et al., <i>Thermal Stabilization of Transition Alumina by Structural Coherence with LnAlO₃ (Ln = La, Pr, Nd)</i> , Journal of Catalysis 114, (1998) pp. 112-120	
	BH	Rahkeev et al., <i>Transition Metal Atoms on Different Alumina Phases: The Role of Subsurfaces Sites on Catalytic Activity</i> , Physical Review B 67, 115414 (2003) pg. 4	
	BI	Rietveld, <i>A Profile Refinement Method for Nuclear and Magnetic Structures</i> , Journal of Appl. Cryst. (1969) 2, pp. 65-71	
	BJ	Roh et al., <i>Partial Oxidation of Methane over Ni/0-Al₂O₃ Catalysts</i> , Chemistry Letters 2001 (pp. 666-667)	
	BK	Santos et al., <i>Standard Transition Aluminas, Electron Microscopy Studies</i> , Materials Research, Vol. 3 No. 4 (2000) pp. 104-114	
	BL	Schaper et al., <i>The Influence of Lanthanum Oxide on the Thermal Stability of Gamma Alumina Catalyst Supports</i> , Applied Catalysis 7 (1983) pp. 211-220	
	AM	Schaper et al., <i>Thermal Stabilization of High Surface Area Alumina</i> , Solid State Ionics 16 (1985) pp. 261-266	
	AN	Seo et al., <i>Experimental and Numerical Studies on Combustion Characteristics of a Catalytically Stabilized Combustor</i> , Catalysis Today 59 (2000) pp. 75-86	
Examiner Signature		Dated Considered	



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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Complete if Known

Application Number	10/706,880
Filing Date	November 12, 2003
First Named Inventor	Shuibo Xie
Group Art Unit	
Examiner Name	
Attorney Docket Number	1856-40401(9948.0-02)

Sheet 4 of 4

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T ²
	BO	Russell et al., <i>Thermal Transformations of Aluminas and Alumina Hydrates</i> , Industrial and Engineering Chemistry Vol. 42, No. 7 (1950) pp. 1398-1403	
	BP	Subramanian et al., <i>Characterization of Lanthana/Alumina Composite Oxides</i> , Journal of Molecular Catalysts, 69 (1991) pp. 235-245	
	BQ	Taylor, <i>Computer Programs for Standardless Quantitative Analysis of Minerals Using the Full Powder Diffraction Profile</i> , Powder Diffraction, Vol. 6, No. 1 (1991) pp. 2-9	
	BR	Tietz et al., <i>Investigations on Lanthanide-ion-exchanged β and β'-Alumina</i> , Journal of Alloys and Compounds, 192 (1993) pp. 78-80	
	BS	Tijburg et al., <i>Application of Lanthanum to Psuedo-Boehmite and γ-Al₂O₃</i> , Chapman and Hall (1991) pp. 6479-6486	
	BT	Weng et al., <i>Mechanistic Study of Partial Oxidation of Methane to Syngas Using In Situ Time-Resolved FTIR and Microprobe Raman Spectroscopies</i> , The Chemical Record Vol. 2, pp. 102-113 (2002)	
	BU	Wu et al., <i>Coupled Thermodynamic-Phase Diagram Assessment of the Rare Earth Oxide-Aluminium Oxide Binary Systems</i> , Journal of Alloys and Compounds, 179 (1992) pp. 259-287	
	BV	Zhou et al., <i>Structures and Transformation Mechanisms of the η, γ and θ Transition Aluminas</i> , International Union of Crystallography (1991) pp. 617-630	
Examiner Signature			Dated Considered